1995, 1996, 1997, 1998 respectively and 0.87%(96/11005), 0.87%(97/11113), 0.87%(75/8646), 0.71%(47/6624) of non-malarial in-patients during the corresponding period. The occurrence of AMI gradually decreased in malaria patients as the years progressed - from 2.47% in 1995, when Mangalore experienced a resurgence of malaria, to 1.06% in 1998.

Conclusion: Compilation of 4-year data has shown a higher occurrence of AMI among all malaria patients (1.44%) compared to AMI among all in-patients other than due to malaria (0.82%), ($p<0.05$). These findings suggest that AMI should be regarded as an important clinical complication of malaria. This is of importance since some of the anti malarial drugs also depress cardiovascular function.

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29.002

Severe malaria in East Kalimantan, Indonesia

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Background: Malaria is endemic in many provinces in Indonesia, especially in Eastern Region, where 35% of population live in areas with risk of getting infected by malaria. Mortality of severe malaria reported in Indonesia is 10 — 30%. Abdul Wahab Sjahranie General Hospital, Samarinda is the top referral hospital in East Kalimantan Province that manage many severe malaria patients sent from some districts around Samarinda.*Objectives:* To know the features of severe malaria patients treated at Abdul Wahab Sjahranie General Hospital Samarinda.

Methods: An observational study was performed on severe malaria patients treated at the Department of Internal Medicine of Abdul Wahab Sjahranie General Hospital, Samarinda during 2 years (January 2007 — December 2008). Severe malaria was diagnosed based on WHO criteria (positive microscopic examination of *Plasmodium falciparum* with one or more complications). Anti malarial drug given was quinine infusion 10 mg/ kg BW/ 8 hours for at least 48 hours, and then continued with sulfate quinine tablet if patients could take oral medicines until 7th day.

Results: There were 47 severe malaria patients treated in this hospital during 2 years, consisting of 43 males (91.5%) and 4 females (8.5%). All patients worked or lived in the forest areas out of Samarinda. Patients ages' were 13 - 63 years, most of them were 20 — 40 years (57.5%). The most common complications found were jaundice (72.3%), cerebral malaria (40.4%), acute renal failure (31.9%), while severe anemia was only 6.4%. Most patients had 1 complication (63.8%), while patients with 2 complications were 21.3%, and patients with 3 or more complications were 14.9%. Mortality of patients with 1 complication, 2 complications, 3 or more complications were 6.7%, 10.0%, 71.4%, respectively. Overall mortality rate was 17.0%.

40 years). Jaundice, cerebral malaria and acute renal failure are the most common complications found. Mortality is related to the number of complications found, whereas patients with 3 or more complications have very high mortality rate (above 70%). Overall mortality rate of severe malaria cases is 17.0%.

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29.003

Performance of four rapid diagnostic tests for diagnosis of falciparum and non-falciparum malaria in endemic areas of Gondar region, Northern Ethiopia

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Background: Malaria remains a major public health problem in Ethiopia, despite decades of a sustained national control program. One of the major obstacles to this control program is the lack of accurate and rapid diagnostic service in most resource poor settings where malaria is endemic. Very recently, efforts have been made to develop and implement various formats of malaria RDTs.

Methods: In view of this, the performance of the OptiMAL-IT, Paracheck-Pf, CareStartTM malaria pLDH 4 line test and CareStartTM malaria pLDH/HRP II combo test were investigated in comparison with microscopic examination of thick and thin blood film in malaria endemic areas of Gondar region. In order to evaluate these assays, the sensitivity, specificity, PPV and NPV values of each RDT were calculated taking microscopy results as the gold standard in a total of 588 febrile patients.

Results: Paracheck-Pf was the most sensitive (100%) assay for the diagnosis of P. falciparum in comparison with OptiMAL-IT (98.1%), CareStartTM malaria pLDH 4 line test (98.1%) and CareStartTM malaria pLDH/HRP II combo test (96.2%). However, OptiMAL-IT was the most specific (99.1%) as compared to Paracheck-Pf (97.9%), CareStartTM malaria pLDH/HRP II combo test (96.4%) and CareStartTM malaria pLDH 4 line test (93.8%) for falciparum malaria diagnosis. For the diagnosis of P. vivax, both CareStartTM assays had better sensitivity (94.4% for CareStartTM malaria pLDH 4 line test and 94.2% for CareStartTMTMTM malaria pLDH/HRP II combo test (97.9%). malaria pLDH/HRP II combo test) as compared to OptiMAL-IT 88.2%. But OptiMAL-IT gave the higher specificity (99.8%) than CareStart malaria pLDH 4 line test (98.1%) and CareStart

Conclusion: Although microscopy remains the gold standard for malaria diagnosis, OptiMALIT, Paracheck-Pf, CareStartTM malaria pLDH/HRP II combo test and CareStartTM malaria pLDH 4 line test may prove a useful screening for malaria control in Ethiopia where microscopic examination is not in place. Finally, further studies on RDT performance is recommended to be undertaken in multisite study fields, in monitoring drug therapy and with respect to molecular analysis.

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